



SHORTFORM DATASHEET
TNxBR-043B-B1-AC-002: “Eadon”

Subject to change, consult TNx prior to design-in

Part of the



family of touchscreens

1 Highlights

Eadon is part of TouchNetix’ Brilliance family of capacitive touchscreen assemblies.

It has the following features:

- + ***Up to 12-bit XY multi-touch reporting***
- + ***Supports up to 10 simultaneous touches***
- + ***Reporting rate typically 80 to 100Hz depending on configuration***
- + ***2.1mm chemically strengthened glass front lens with AR coating***
- + ***Robust sensor design allows operation with a wide range of displays***
- + ***Industry leading EMC performance, especially for conducted immunity***
- + ***Viewing area is diagonal 16:9, tailored to fit most 4.3” TFT LCD panels***
- + ***I2C communication interface***
- + ***Active FPC tail connects to host via low cost 10 way 1mm pitch ZIF connector***
- + ***Two user configurable FPC tail length options***
- + ***Allows contemporary “bezel free” designs***
- + ***Supported by TouchNetix’ proprietary TNxTouchHub tuning software for Windows™***
- + ***3D CAD available on request¹***

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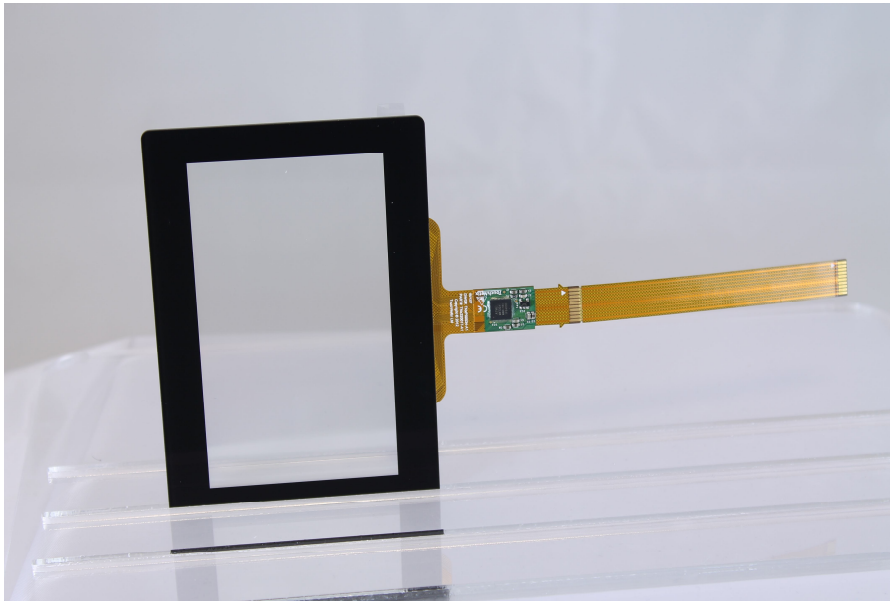
¹ STEP file

2 Ordering Part Numbers

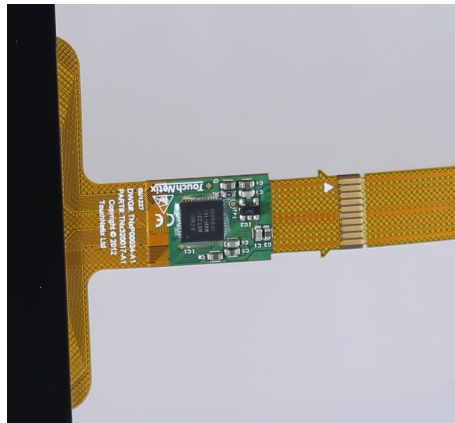
2.1 Touchscreen Assembly

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2.2



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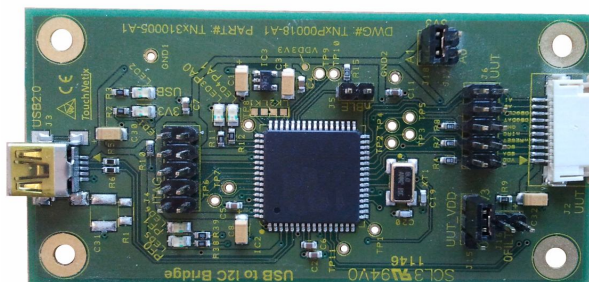


Optional Accessories

2.2.1 I²C to USB Adapter

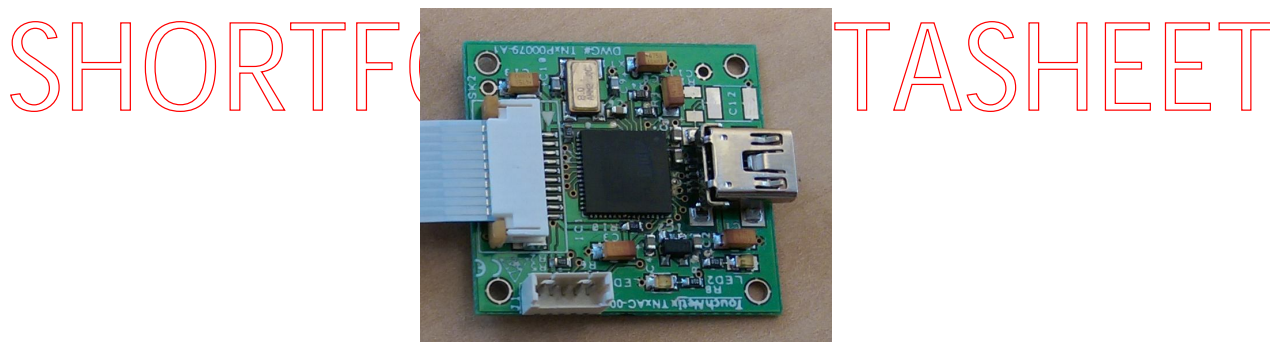
10way FFC to USB via bridge² using I²C interface.

TNxAC-002



2.2.2 Mouse Mode USB Adapter (TNxAC-003)

Connects to the 10-way FFC connector on the sensor control PCB and outputs to a USB Mini-B receptacle. This allows the host to treat the touch panel as a Mouse HID device in either relative (touchpad) mode or absolute (digitizer style) mode. The board measures 32x30mm³.



² The bridge appears as an HID class device using a proprietary comms protocol to talk to the touch controller via I²C (supported by TNxTouchHub)

³ Note that J1 (rectangular 5-way B2W connector) in the picture is an optional fit and is *not* populated by default.

EVK

An evaluation kit is available

TNxBR-EVK-043B-A1-AC-002

It contains the following items:

- 1x TNxBR-043B-A1-AC-002
- 1x TNxAC-002
- 1x USB stick containing TNxTouchHub evaluation and tuning software for XP/Win7

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3 Mechanical Specifications

3.1 Cover Lens

Material:	1.8mm (nom) chemically strengthened soda-lime glass
Overall dimensions:	116.1 mm by 79.0 mm
Transparent (touch) area:	96.0 mm by 55.0 mm
Border decoration:	Process black ink, rear-side printed
Surface treatment:	Anti-fingerprint (AF) coating
Surface hardness:	6-7H typ.
Anti-shatter:	Fragmentation resistance of bonded sensor ⁴
Protective film:	Peel off type, to entire upper lens surface

3.2 Sensor

Base material:	PET (Polyethylene terephthalate)
Thickness:	0.4mm typ. from rear of lens
Active (touch) area:	101.2mm by 58.6mm

3.3 FPC

Position:	Exits sensor at middle of long edge
Material:	Polyimide substrate + localized epoxy-glass FR4 rigidizer
Max thickness:	Rigidizer + substrate + highest component: 2.0 mm
Max component height:	1.0 mm above FPC top side
Components:	Top side only above rigidizer
Length ⁵ :	100.0mm standard, 13.6mm by user cutting excess tail
Contact fingers:	Gold plated
Mounting:	See “TNxAN00009 FPC Considerations for Touchscreen Assemblies”
Min bend radius:	2mm
Max bending cycles:	3

3.4 Assembly

Transmissivity:	85% typ. at 550nm
Orientation:	Suitable for portrait or landscape use
Outline drawing:	See Section 7 Mechanical Drawing
LCD attachment:	0.5mm thick adhesive foam gasket provided mounted to rear of sensor suitable for most 4.3” 16:9 TFT panels. Fitted with peel-off release liner that covers entire transparent region. 3M467 (or equivalent) adhesive tape forms bond to LCD bezel
Attachment to housing:	See “TNxAN00010 Recommended Attachment Methods for Touchscreen Assemblies”
Overall max thickness:	2.2mm typical (lens + sensor)
Mass:	150 g typ.

⁴ Application testing required: sensor does not cover entire lens

⁵ Measured to the nearest edge of the component rigidizer

3.5 Environmental

Operating temperature:	-20°C to +70°C
Operating humidity:	5 to 90% RH non-condensing
Storage temperature:	-30°C to +85°C
Storage humidity:	45 to 85% RH non-condensing
Impact rating:	IK06 typical to touch surface ⁶
RoHS:	Compliant

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⁶ Using a 500g steel ball dropped from 20cm, Lens attached to housing using foam gasket all around

7 Mechanical Drawing

